

II. Amendments to the Claims

This listing of claims replaces without prejudice all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently Amended) Method for obtaining highly reactive calcium sorbents from a mixture of fine grained calcium carbonate and and/or fly-ashes, through mechanical de-agglomeration and activation by free particles collisions at the speed at least 8 m/sec., of the mixture containing 20-60% 20÷60% by weight, beneficially 40% of fine grained calcium carbonate with grain size below 150 μm and content at least 92% by weight of pure CaCO_3 with fly-ashes, coming from combustion of coal fuels, especially in boilers with fluidized bed furnaces or equipped with powdered fuel burners, where the dry desulfurization of exhaust gases is used, characterized in that calcium carbonate is being preliminary mixed with ashes containing by weight from 25% to 45% of SiO_2 , from 3% to 25% of Al_2O_3 , from 10% to 40% of CaO , from 5% to 15% of SO_3 , and then the mixture is being mechanically de-agglomerated and activated.

2. (Currently Amended) Method for obtaining the highly reactive calcium sorbents, from a mixture of fine grained calcium carbonate and and/or fly-ashes, through mechanical de-agglomeration and activation by free collisions of particles at the speed at least 8 m/sec of fly-ashes, coming from combustion of coal fuels, especially in boilers with fluidized bed furnaces or equipped with powdered fuel burners, where the dry desulfurization of exhaust gases is used, characterized in that ashes containing by weight 25% to 45% of SiO_2 , from 3% to 25% of Al_2O_3 , from 10% to 40% of CaO , from 5% to 15% of SO_3 are mechanically de-agglomerated and activated.

3-5. (Cancelled)

6. (New) The method of claim 1, wherein the mixture containing 40% by weight of fine grained calcium carbonate with grain size below 150 μm .

7. (New) The method of claim 1, wherein the fly-ashes comes from combustion of coal fuels in boilers with fluidized bed furnaces or equipped with powdered fuel burners.

8. (New) The method of claim 2, wherein the fly-ashes comes from combustion of coal fuels in boilers with fluidized bed furnaces or equipped with powdered fuel burners.